

**Lepanthopsis barahonensis** (Cogn.) Garay, comb. nov.

Basionym: *Pleurothallis barahonensis* Cogn. in Urb. Symb. Antill. 7: 177. 1912.

**Lepanthopsis blepharophylla** (Griseb.) Garay, comb. nov.

Basionym: *Pleurothallis blepharophylla* Griseb. Cat. Pl. Cub. 260. 1866.

**Lepanthopsis dentifera** (L. O. Wms.) Garay, comb. nov.

Basionym: *Pleurothallis dentifera* L. O. Wms. in Ceiba 1: 227. 1951.

**Lepanthopsis Fuertesii** (Cogn.) Garay, comb. nov.

Basionym: *Pleurothallis Fuertesii* Cogn. in Urb. Symb. Antill. 7: 178. 1912.

**Brachionidium ciliolatum** Garay, sp. nov.

FIG. 3g-j.

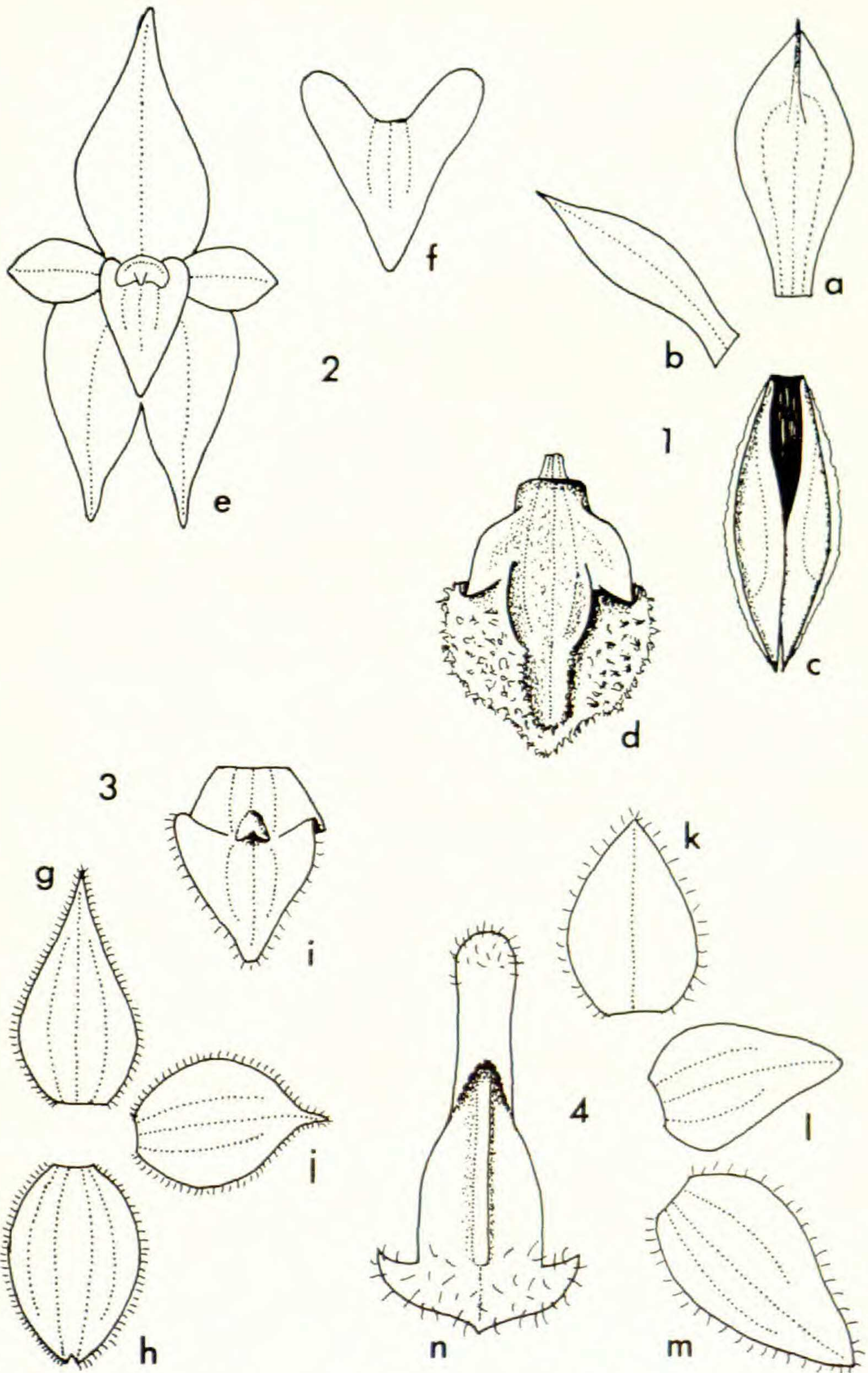
Epiphytica, parvula, ascendenti, usque ad 7 cm. alta; radicibus filiformibus, glabris; rhizomate ascendenti, cauliformi, vaginis scariosis, infundibuliformibus imbricantibusque omnino obtecto; caulibus secundariis vix ullis, monophyllis; foliis pergameneis, oblongo-ellipticis, acutis, subpetiolatis, usque ad 2 cm. longis, 5 mm. latis; inflorescentiis singulis, unifloris; pedunculo capillari, in medio univaginato, usque ad 3 cm. longo; bracteis infundibuliformibus, ovariis pedicellatis aequilongis; floribus pro genere satis parvulis, ciliolatis; sepalo postico ovato-lanceolato, subacuminato, 3-nervato, margine ciliolato, 7 mm. longo, 4 mm. lato; sepalis lateralibus usque ad apicem connatis, ibi bidentatis, ellipticis, obtusis, 4-nervatis, margine ciliolatis, 6 mm. longis, 4 mm. latis; petalis ellipticis, apice subito in apiculo triangulari-subfalcato, acuminato productis, 3-nervatis, margine ciliolatis, 6 mm. longis, 4 mm. latis; labello carnosio, e cuneata basi subsigmoideo, antice triangulari, acuto, 3-nervato, margine valde ciliolato; disco callo pulvinari, antice exciso ornato; toto labello 3 mm. longo, 2.5 mm. lato; columna humili, crassa, vix 1 mm. alta; ovario pedicellato ca. 2 mm. longo.

**Puerto Rico:** Pico del Oeste, Sierra de Luquillo, 1020 m. alt. Epiphytic orchid, plants with 3-4 leaves; flowers yellow-green, apparently do not open. Study trail area. *R. A. Howard & L. I. Nevling 16929* (AMES, type!).

This new species closely resembles *B. parvum* Cogn. both in size and in general appearance. It differs, however, in the shape of the floral segments which are not caudate. Both *B. tetrapetalum* (Lehm. & Krzl.) Schltr., and *B. simplex* Garay, although similar in appearance to *B. ciliolatum* Garay, have dissimilar and eciliate lips.

**Epidendrum isochilum** var. **tridens** Rchb. f. in Ber. Deutsch. Bot. Ges. 3: 277. 1885.

Syn.: *Epidendrum belvederense* Fawc. & Rendle in Jour. Bot. 47: 123. 1909.



FIGURES 1-4, West Indian orchids. FIG. 1, a-d, *Cryptophoranthus erosus* Garay; FIG. 2, e-f, *Lepanthopsis Dodii* Garay; FIG. 3, g-j, *Brachionidium ciliolatum* Garay; FIG. 4, k-n, *Campylocentrum constanzense* Garay. All figures greatly magnified.

There appears to be no distinction between *Epidendrum belvederense* Fawc. & Rendle and *E. isochilum* var. *tridens* Rchb. f. as a study of the holotypes indicates. Judging from the number of specimens which I have examined of this species from the Dominican Republic, this variety seems to be much more common than the typical variety, which is described as having an entire lip.

***Epidendrum neoporpax*** Ames in Bot. Mus. Leaflet. Harvard Univ. 2: 112. 1934.

Basionym: *Epidendrum Porpax* Rchb. f. in Flora 48: 278. 1865 not Rchb. f. 1855.

Syn: *Epidendrum vestitum* Ames in Sched. Orch. 4: 51. 1923.

*Epidendrum Porpax* var. *domingensis* Cogn. in Urb. Symb. Antill. 7: 181. 1912.

This rather rare Cuban species has been found recently in Costa Rica, and rediscovered by Mr. *Ariza Julia*, s.n., in the **Dominican Republic**: Sabaneta de Yasica, Puerto Plata Province. An examination of the type of *Epidendrum Porpax* var. *domingensis* Cogn. in the Bruxelles herbarium convinces me that it is identical with *E. neoporpax* Ames.

***Epidendrum Sintenisii*** Rchb. f. in Ber. Deutsch. Bot. Ges. 3: 277. 1885.

Syn.: *Epidendrum monticolum* Fawc. & Rendle in Jour. Bot. 47: 124. 1909.

Recently I had the opportunity to examine and to compare the holotypes of *E. Sintenisii* Rchb. f. and *E. monticolum* Fawc. & Rendle. As a result of this study, I am convinced that they are conspecific. *Epidendrum Sintenisii* is now recorded from Puerto Rico and Jamaica.

***Stellilabium minutiflorum*** (Krzl.) Garay, comb. nov.

Basionym: *Telipogon minutiflorus* Krzl. in Ann. Nat. Hist. Mus. Wien 33: 14. 1919.

Syn.: *Telipogon Lankesteri* Ames Sched. Orch. 3: 23. 1923.

*Stellilabium Helleri* L. O. Wms. in Brittonia 14: 443. 1962.

This rather rare Costa Rican species has recently been found in the **Dominican Republic**: Casalito Bonao by *Rev. D. Dod*, s.n. (NY). This is also a new record for the West Indies. *Stellilabium Helleri* L. O. Wms., of which I also have studied the holotype, agrees in every respect with Kraenzlin's type material which I examined in Vienna. *Telipogon Lankesteri* Ames likewise, does not offer any criterion by which it could be kept separate from *S. minutiflorum* (Krzl.) Garay.

***Polyradicion*** Garay, gen. nov.

Pfizer in describing the genus *Polyrrhiza* stated that it consists of four West Indian species. Of these four he mentioned only one in making

an official transfer, namely *P. funalis* (Sw.) Pfitz. Thus, the genus *Polyrrhiza* is typified by this species. In *Flora of Jamaica*, Fawcett and Rendle regard *P. funalis* (Sw.) Pfitz. to be a synonym of *Dendrophylax funalis* (Sw.) Benth., a judgment which I consider to be correct. Since *Polyrrhiza* automatically becomes a synonym of *Dendrophylax* through this transfer, it leaves the other species without a validly published generic name. Since there are only two species involved I reject the idea of conservation in favor of a new name which I propose here with the same etymological meaning as was used by Pfitzer. The genus is, thus, characterized as follows:

Sepala petalaeque simillima, aperta, lanceolata; labellum maximum, 3-lobum, lobi laterales quam lobum intermedium multoties breviores, basi in calcari valde evolutum producta; columna humilis, crassa, apoda, basi labellum adnata; clinandrium humile; anthera incumbens, opercularis; pollinia 2, stipiti nudi, distincti glandulae affixa.

Plantae epiphyticae, aphyllae; radices crassae, valde evolutae; caules vix ulli; pedunculi laterales, graciles, arcuati, abbreviati, semper uniflori; flores majusculae.

Species 2, Indiae Occidentalis incolae.

Typus: *Angraecum Lindenii* Lindl.

#### **Polyradicion Lindenii** (Lindl.) Garay, comb. nov.

Basionym: *Angraecum Lindenii* Lindl. in Gard. Chron. 135. 1846.

Syn.: *Aeranthus Lindenii* Rchb. f. in Walp. Ann. Bot. Syst. 6: 902. 1864.

*Dendrophylax Lindenii* Benth. ex Rolfe in Gard. Chron. ser. 3. 4: 533. 1888.

*Polyrrhiza Lindenii* Cogn. in Urb. Symb. Antill. 6: 680. 1910.

Distribution: Florida, Cuba.

#### **Polyradicion Sallei** (Rchb. f.) Garay, comb. nov.

Basionym: *Aeranthus Sallei* Rchb. f. in Walp. Ann. Bot. Syst. 6: 902. 1864.

Syn.: *Dendrophylax Sallei* Benth. ex Rolfe in Gard. Chron. ser. 3. 4: 533. 1888.

*Polyrrhiza Sallei* Cogn. in Urb. Symb. Antill. 6: 680. 1910.

Distribution: Dominican Republic, Haiti.

#### **Dendrophylax gracilis** (Cogn.) Garay, comb. nov.

Basionym: *Polyrrhiza gracilis* Cogn. in Urb. Symb. Antill. 6: 679. 1910.

An examination of the holotype, *Wright 3300*, in the Orchid Herbarium of Oakes Ames has shown clearly that it is referable to the genus *Dendrophylax* Rchb. f. It is closely allied to *D. hymenantha* Rchb. f., differing in its shorter, 1-flowered peduncle and in the size of its flowers which are twice as large. *Dendrophylax hymenantha* Rchb. f., however, has been united with *D. varius* (Gmel.) Urb., but this decision requires further study.

**Campylocentrum constanzense** Garay, sp. nov.

FIG. 4k-n.

Epiphytica, caespitosa, aphylla, usque ad 4 cm. alta; radicibus numerosis fasciculatis, filiformibus, flexuosis, glabris; caulibus nullis vel vix ullis; inflorescentiis numerosis, fasciculatis, erectis, capillaribus, simplicibus vel dichotome ramosis, supra laxe plurifloris, omnino setaceo-hirsutis, usque ad 4 cm. longis; bracteis ovato-cucullatis, acutis vel obtusiusculis, extus setaceo-hirsutis, 1 mm. longis; floribus minimis, hyalinis; sepalo postico ovato, acuto vel obtusiusculo, uninervio, extus sparse setaceo-hirsuto, 1.5 mm. longo, 1 mm. lato; sepalis lateralibus oblique ovatis, obtusiusculis, extus setaceo-hirsutis, 3-nerviis, 2 mm. longis, 1 mm. latis; petalis subfalcato-ovatis, obtusiusculis, 3-nerviis, glabris, 1.5 mm. longis, 1 mm. latis; labello anchoriformi-lobato, antice breviter apiculato, basi calcarato, calcari cylindrico obtuso, setaceo-hirsuto; disco in medio longitudinaliter carinato, antice setaceo-hirsuto; toto labello 3 mm. longo, antice 1.5 mm. lato; columna humili, crassa, vix 1 mm. alta; ovario cylindrico, muricato-hispidulo, cum pedicello 2 mm. longo.

**Dominican Republic:** Constanza, epiphytic on trees, *Rev. D. Dod 66* (AMES, type!).

This species is quite unique in the Section DENDROPHYLOPSIS Cogn. because of the anchor-shaped lip and a distichously branching, setaceous inflorescence.

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## POLLEN CHARACTERISTICS OF AFRICAN SPECIES OF VERNONIA

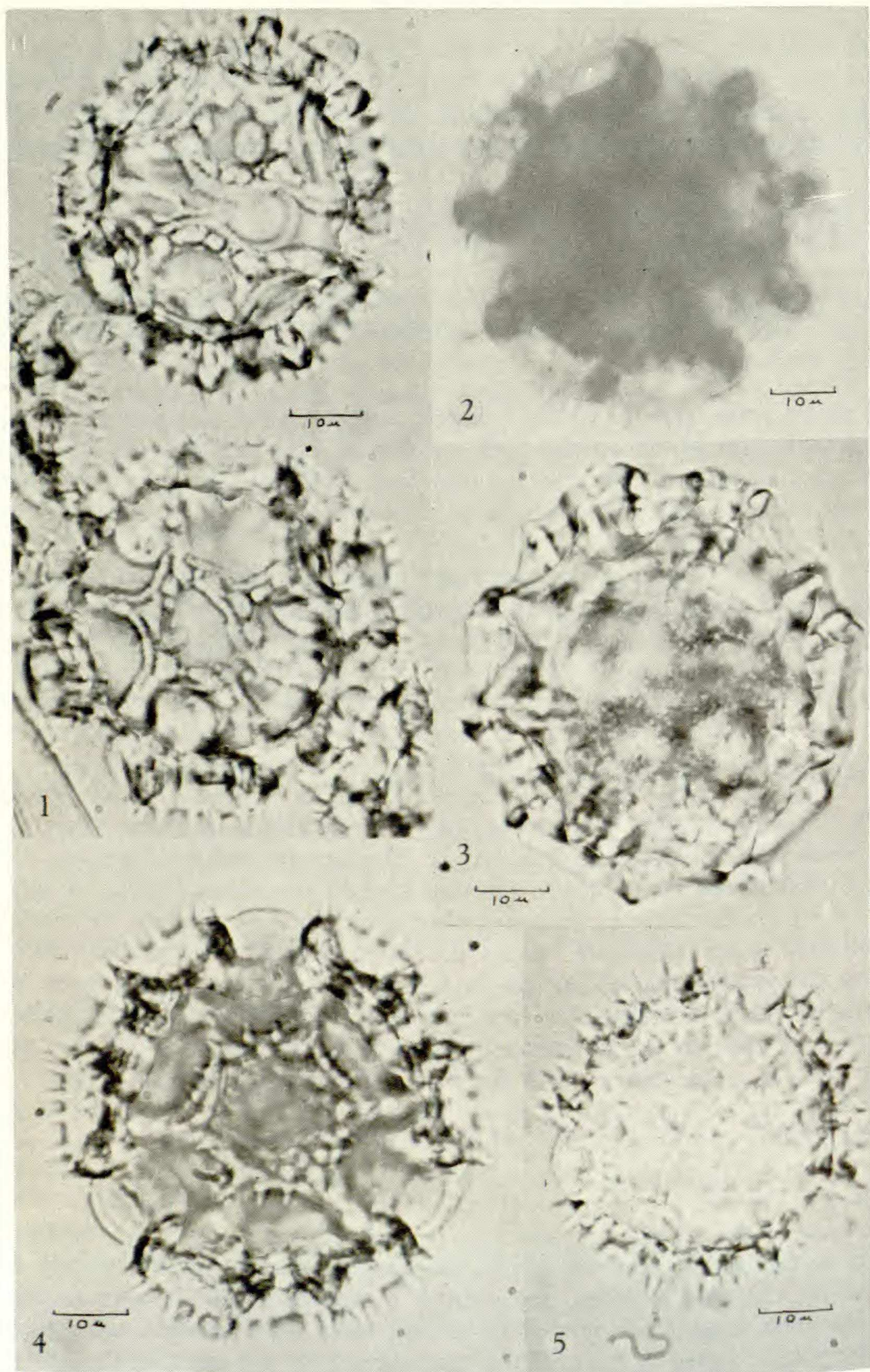
C. EARLE SMITH, JR.

DURING A TAXONOMIC STUDY of the species of section STENGELIA of the Composite genus, *Vernonia*, pollen of a number of species was examined. Whenever possible, a floret from a specimen of the type collection was dissected and the anthers macerated in lacto-phenol and methylene blue. A single grain from each slide was photographed. Size was determined by measurements of ten grains from each slide, after scanning to ascertain whether the grains measured fell into more than one size class. Measurements were made to the outside of the reticula, but did not include the length of spines.

Obviously, not all of the specimens examined belong to section STENGELIA, although all of the species have been assigned here because of thin terminal appendages on otherwise firm or chartaceous phyllaries. Perhaps a future student of the genus will find corollary characters on which the sections of the genus can be more firmly based. The large number of species involved in Africa alone precludes this in my short-term examination of the section STENGELIA.

Pollen sizes range from an average of 29.1  $\mu$  for *Vernonia praecox* Welw. ex O. Hoffm. to 69.5  $\mu$  for grains of *V. wittei* Hutch. & Burtt (FIG. 6). The average pollen diameter is 51.9  $\mu$ . The largest number of species with a similar pollen size fall into the next highest size class, 53.3  $\mu$ . A total of seven species have an average pollen size of 51.7  $\mu$ . Twenty-six species fall into larger pollen-size classes and 24 species fall into smaller pollen-size classes than the 15 species in the median groups. Thus, except for the few plants having either very large pollen grains or very small pollen grains in relation to the average pollen size for this group of species, the species are well clustered with the greatest number falling centrally.

No attempt was made to study the anatomy of the pollen grains of this group. Morphologically, all of the grains examined are similar. All are nearly spherical and are evidently tricolporate, although this sometimes is difficult to determine (FIG. 4). In all of the pollen examined, the outside of the grain is marked by a raised reticulum. This may be thin, but in the majority of the species the surface reticulum is moderately to heavily thickened. Often, the pattern of the reticulum is very regular with polar alveoli surrounded by a ring from which radiate, at regular intervals, a series of bars. These are crossed on the sides of the grains at regular intervals by bars of equal size. On one side of the grain a longitudinal alveolus extends from pole to pole and one of the pores occurs in this at the equator (FIG. 1). Frequently, the polar rings are



FIGURES 1-5, pollen grains of *Vernonia* species. FIG. 1, *Vernonia guineensis* var. *cameroonica*, average pollen diameter  $51.7\mu$ ; the lower grain, in polar view, shows the regularity of the reticulation common to many of the upright or shrub-